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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,723	05/18/2000	MICHAEL LAMLA	JEK/LAMLA	2431

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ALEXANDRIA, VA 22314-1176

EXAMINER

PICH, PONNOREAY

ART UNIT	PAPER NUMBER
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2135

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/486,723	<b>Applicant(s)</b> LAMLA ET AL.	
	<b>Examiner</b> Ponnoreay Pich	<b>Art Unit</b> 2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/20/2005 has been entered.

Claims 1-14 are pending.

### ***Response to Arguments***

Applicant's arguments have been considered, but are moot in view of new rejections. See below for further clarification.

### ***Specification***

The disclosure is objected to because of the following informalities:

1. On page 4 of the specification, the second sentence of the fourth paragraph states "microcontroller 2 of external device 5". The examiner believes this to be a mistake and it should instead recite "microcontroller 5 of external device 2", see Figure 1.
2. The last sentence in the first paragraph of page 6 seems to be incorrectly worded. The examiner is assuming that perhaps applicant meant "However, one use data transmission of different signals which can be separated from each other by chip card 1 or terminal 2."

Appropriate correction is required.

### ***Claim Objections***

Claim 8 is objected to because of the following informalities: As per claim 8, in line 13, the examiner respectfully suggests replacing "said signal" with "said signal for authenticity testing" to clarify to which signal is being referred. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

1. Claims 1-12 and 14 recite "the first and second transmission channels", "the first transmission channel", and/or "the second transmission channel", which lacks antecedent basis. The examiner believes applicant may have meant "the first and second bidirectional transmission channels", "the first bidirectional transmission channel", and "the second bidirectional transmission channel", which would reflect applicant's amendments.
2. Claim 4 recites in line 2, "the signal pattern" which lacks antecedent basis.
3. Claim 7 recites "the supply voltage" which lacks antecedent basis. The examiner believes applicant may have meant just "supply voltage".
4. Any claims not specifically addressed are rejected by virtue of dependency.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7 and 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Caputo et al (US 5,878,142).

**Claim 1:**

Caputo discloses the limitations of:

1. Providing a first bidirectional transmission channel for transmitting signals between the data carrier and the external device (Fig 3; Fig 5A-5B; and col 8, line 56-col 9, line 21).
2. Providing a second bidirectional transmission channel logically separated from the first transmission channel, the separation of the first and second transmission channels being so designed that data transmission via one transmission channel does not interfere with data transmission via the other transmission channel and the second transmission channel is activable during the total period between activation and deactivation of the data carrier (Fig 3; Fig 5A-5B; and col 8, line 56-col 9, line 21).

3. Having the data carrier generate a signal for authenticity testing (Fig 5A-5B and col 8, line 63-col 9, line 3).
4. Transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating the signal for authenticity testing from the external device to the data carrier at least partly via the second transmission channel (Fig 5A-5B and col 8, line 63-col 9, line 3).
5. Having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic (Fig 5A-5B and col 9, lines 4-11).

The examiner notes that in applicant's specification, applicant states that separation between transmission channels may be either physical or logical in nature. With logical separation of transmission channels, two channels are physically one and the same transmission channels, however, different data signals are transmitted on the same physical channel. The data signals are separated by either the terminal or chip card (page 6, first paragraph, lines 6-11). For this reason, the examiner believes that the transmission channel disclosed by Caputo, i.e. phone line, reads on a bidirectional transmission channel, which is logically separated into at least two separate channels.

Figures 5A and 5B of Caputo shows that a data carrier, item 57, is in communication with an external device, item 53. Two logical transmission channels are seen as represented by the arrows connecting items 53 and 57. Physically, however, both transmission channels logically represented by the arrows connecting items 53 and

Art Unit: 2135

57 in Fig 5A and 5B are implemented using just a telephone line (Fig 3 and col 4, lines 24-30). A telephone line is a bidirectional transmission channel, so both the first and second transmission channels are still bidirectional transmission channels since they're both physically still one channel. The telephone line being bidirectional can further be seen in Fig 5A and 5B in that the physical channel connecting items 53 and 57 can be used to both send and receive data.

Further, as well as being used for authentication, the telephone line is also used to send other data, i.e. user's data, between the external device and the data carrier (col 9, lines 12-21). The same transmission line being used to send data that is used for authentication and later for other encrypted data also reads on the phone line being a bidirectional transmission channel which is logically separated into two separate bidirectional data transmission channels.

Note also in Fig 4A that even though the data carrier is shown as having two ports (12 and 14) for communication with two external devices, as seen in Fig 3, only the signals sent to one of those devices are actually used in authenticating the data carrier, i.e. item 38 in Fig 3 authenticates the data carrier.

For the reasons above, the examiner respectfully submits that claim 1 as amended by applicant is still too broad and Caputo still reads on the recited limitations.

**Claim 2:**

Caputo further discloses that the second transmission channel is provided by modulating the signal of the first transmission channel (col 4, lines 24-30 and col 9, lines 7-16).

Art Unit: 2135

**Claim 3:**

Caputo further discloses that modulation does not impair an ISO compatibility of data exchange between the data carrier and the external device existing for the first transmission channel (col 5, lines 43-53). Note that the American National Standards Institute is a member of ISO, so ANSI standards are also ISO standards.

**Claim 4:**

Caputo further discloses that modulation is performed in areas of the signal pattern which are not evaluated according to the ISO standard (col 4, lines 24-28).

**Claim 5:**

Caputo further discloses that the changes caused by modulation in the signal of the first transmission channel are within the range of variation of the signal level permitted by the ISO standard (col 4, lines 24-28 and col 9, lines 59-64).

**Claim 6:**

Caputo discloses modulation and demodulation of the signal are performed in the data carrier and in the external device with the aid of a mixing/demixing device, i.e. modem, in each case (Fig 3; Fig 4A; and col 4, lines 24-29). Note all modems contain multiplexers and demultiplexers, which are mixing and demixing circuits.

**Claim 7:**

Caputo further discloses that the first transmission channel is a line for transmitting standard data or a line for transmitting a clock signal or a line for supply voltage (Fig 3; col 4, lines 24-28; and col 4, lines 40-45).

**Claim 11:**



The limitation of the decision on authenticity of the data carrier is contingent on whether data exchange is possible between the devices to which the first and second transmission channels are coupled in the data carrier is inherent to Caputo. Note Fig 5A. Receiver 58 and Transmitter 68 are coupled to the phone line, i.e. first and second transmission channels. For authentication to be possible, the data sent to the data carrier and received by Receiver 58 must be communicated to items 60, 70, and finally Transmitter 68 so that it may be transmitted to external device 53 to be authenticated. If communication of data between item 58 and item 68 were not possible, authentication cannot take place since transmitter 68 would have no data to send to the external device.

**Claim 12:**

Caputo discloses the limitations of:

1. The data carrier has a first device for generating signals for data exchange between the data carrier and the external device, and the first device is adapted to be coupled to a first bidirectional transmission channel (Fig 4A and col 4, lines 24-32).
2. The data carrier has a second device for generating signal required for authenticity testing of the data carrier, and the second device is adapted to be coupled to a second bidirectional transmission channel and connected with the first device (Fig 4A, item 46; Fig 5A-5B; and col 4, lines 24-28).
3. The first and second transmission channels are separated logically or physically (Fig 3; Fig 5A-5B; and col 8, line 56-col 9, line 21).

Art Unit: 2135

4. Data exchange with the second device does not interfere with the first device, and the second device is ready for generating signals for authenticity testing of the data carrier during the total time period between activation and deactivation of the data carrier (Fig 3; Fig 5A-5B; and col 8, line 56-col 9, line 21).

Note in Fig 4A, either one of items 42 or 48 reads on a first device for generating signals for data exchange between the data carrier and the external device. Note further that as seen in Fig 3, the data carrier, item 10, is in communication with the external device via a telephone line. Therefore, there is only one physical communication channel between the data carrier and the external device. This one physical channel is logically separated into a first and second bidirectional communication channel. See claim 1 for explanation of why the phone line disclosed by Caputo reads on two logically separate bidirectional transmission channels.

**Claim 13:**

Caputo further discloses that the first device and the second device are each coupled to the transmission channels via a mixing/demixing module, i.e. modem (col 4, lines 24-28 and Fig 4A).

**Claim 14:**

Caputo discloses the limitations of:

1. A data carrier with a first device for generating signals for data exchange with the external device and a second device for generating and/or processing signal for authenticity testing (Fig 4A).

2. An external device with a first device for generating signals for data exchange with the data carrier and a second device for generating and/or processing signals for authenticity testing (Fig 3, item 38 and col 8, line 56-col 9, line 21).
3. A first bidirectional channel for transmitting signals between the first device of the data carrier and the first device of the external device (Fig 3; Fig 5A-5B; and col 8, line 56-col 9, line 21).
4. And a second bidirectional transmission channel for transmitting signals between the second device of the data carrier and the second device of the external device, the first and second transmission channels being separated logically or physically and the separation of the first and second transmission channels being so designed that data transmission via one transmission channel does not interfere with data transmission via the other transmission channel, and the second transmission channel being activable during the total period between activation and deactivation of the data carrier (Fig 3; Fig 5A-5B; and col 8, line 56-col 9, line 21).

See claim 1 for explanation of why telephone line connecting the data carrier and the external device reads on a first and second bidirectional transmission channels.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2135

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caputo et al (US 5,878,142) in view of Reel et al (US 5,852,653).

**Claim 8:**

Caputo discloses the limitations of:

1. Providing a first bidirectional transmission channel for transmitting signals between the data carrier and the external device (Fig 3; Fig 5A-5B; and col 8, line 56-col 9, line 21).
2. Providing a second bidirectional transmission channel separated from the first transmission channel, the second transmission channel being activable during the total period between activation and deactivation of the data carrier (Fig 3; Fig 5A-5B; and col 8, line 56-col 9, line 21).
3. Having the data carrier generate a signal for authenticity testing (Fig 5A-5B and col 8, line 63-col 9, line 3).
4. Transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating said signal for authenticity testing from the external device to the data carrier at least partly via the second transmission channel (Fig 5A-5B and col 8, line 63-col 9, line 3).
5. Having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic (Fig 5A-5B and col 9, lines 4-11).

Caputo does not specifically disclose the second transmission channel is physically separated from the first transmission channel and comprising at least one line or contactless transmission path not provided according to the ISO standard. However, Reel discloses a second transmission channel is physically separated from the first transmission channel (Fig 1). Note authentication path 16 is physically one transmission channel and communication path 20 is physically another transmission channel. Both are physically separate from each other and both are bidirectional. Further, ISO does not define having separate physical transmission lines for authentication and communication, therefore the second transmission line disclosed by Reed is not provided according to the ISO standard.

In light of Reel's teachings, at the time applicant's invention was made, it would have been obvious to one of ordinary skill in the art to modify Caputo's invention according to the limitation recited in claim 8 such that the second bidirectional transmission channel is physically separated from the first transmission channel. One of ordinary skill would have been motivated to do so because providing a separate communication channel that is not connected until successful authentication is performed would increase security in Caputo's system by preventing users from bypassing authentication procedures.

Art Unit: 2135

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caputo et al (US 5,878,142) in view of Reel et al (US 5,852,653) and further in view of Matsushita et al (US 4,837,556).

**Claim 9:**

Caputo and Reel do not specifically disclose the contactless transmission path is realized by transmitting the data as electromagnetic, electrostatic, magnetic, acoustic or optical signals. However, this limitation was known in the art at the time applicant's invention was made as disclosed by Matsushita (col 1, lines 8-13 and 39-42).

At the time applicant's invention was made, it would have been obvious in light of Matsushita's teachings for one of ordinary skill in the art to modify Caputo and Reel's combination invention further according to the limitations recited in claim 9. One of ordinary skill would have been motivated to do so to overcome system failure due to bad contacts as disclosed by Matsushita (col 1, lines 54-60).

**Claim 10:**

The limitation of a mixture of wavelengths is used for transmission via the contactless transmission path is obvious to Caputo, Reel, and Matsushita's combination invention as Matsushita discloses the limitation (col 1, lines 8-42).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is 571-272-7962. The examiner can normally be reached on 9:00am-4:30pm Mon-Fri.

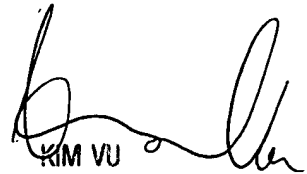
Art Unit: 2135

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PP

Ponnoreay Pich  
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Art Unit 2135



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